

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-339821

(43)Date of publication of application : 08.12.2000

(51)Int.Cl.

G11B 19/02

G11B 19/28

H02P 5/00

(21)Application number : 2000-122996

(71)Applicant : INTERNATL BUSINESS MACH
CORP <IBM>

(22)Date of filing : 24.04.2000

(72)Inventor : JEFFREY JOSEPH DOBEC
ROWAN BRYAN SCOTT
LEWIS JOSEPH SERRANO
MANTORU MAN HON YUU

(30)Priority

Priority number : 99 300556 Priority date : 27.04.1999 Priority country : US

(54) CONTROL METHOD FOR SPINDLE MOTOR FOR HEAD LOADING OF DISK DRIVE, AND ITS SYSTEM

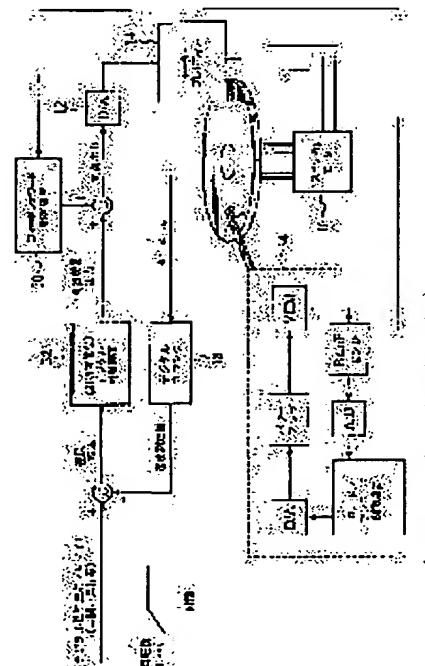
(57)Abstract:

PROBLEM TO BE SOLVED: To reduce latent possibility of delay in a servo control loop at the time of achieving an appropriate spindle speed by compensating previously drag effect in head loading from a lamp position of a disk drive.

SOLUTION: A feed forward control device 30 including a control loop is provided in a form of firmware, drag variation during head loading operation is decided, appropriate control is applied to a spindle motor 16 using expected drag variation, and drag variation is previously compensated.

That is, expected drag variation follows the prescribed variation generated by the prescribed servo mechanism system. The control device 30 compensates previously expected drag variation, and provides a feed forward control signal generating a control output signal converted by a D/A

12 to a motor pre-driver 14 by combining with an output signal of a control device of a digital control device 32. Therefore, control in which the speed of the spindle motor 16 is limited in a



specified tolerable range is performed during head load process.

LEGAL STATUS

[Date of request for examination] 24.04.2000

[Date of sending the examiner's decision of rejection] 19.11.2002

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office